



(43) International Publication Date
12 August 2004 (12.08.2004)

PCT

(10) International Publication Number
WO 2004/068732 A3

- (51) **International Patent Classification⁷:** **H04B 1/38**

(21) **International Application Number:** **PCT/JP2004/000959**

(22) **International Filing Date:** 30 January 2004 (30.01.2004)

(25) **Filing Language:** English

(26) **Publication Language:** English

(30) **Priority Data:**
 2003-021320 30 January 2003 (30.01.2003) JP
 2003-032486 10 February 2003 (10.02.2003) JP

(71) **Applicant (for all designated States except US):** **CASIO COMPUTER CO., LTD.** [JP/JP]; 6-2, Hon-machi 1-chome, Shibuya-ku, Tokyo 151-8543 (JP).

(72) **Inventors; and**

(75) **Inventors/Applicants (for US only):** **YOSHIDA, Kaoru** [JP/JP]. **MURATA, Yoshiyuki** [JP/JP].

(74) **Agents:** **SUZUYE, Takehiko** et al.; c/o Suzuye & Suzuye, 7-2, Kasumigaseki 3-chome, Chiyoda-ku, Tokyo 100-0013 (JP).

(81) **Designated States (unless otherwise indicated, for every kind of national protection available):** AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) **Designated States (unless otherwise indicated, for every kind of regional protection available):** ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

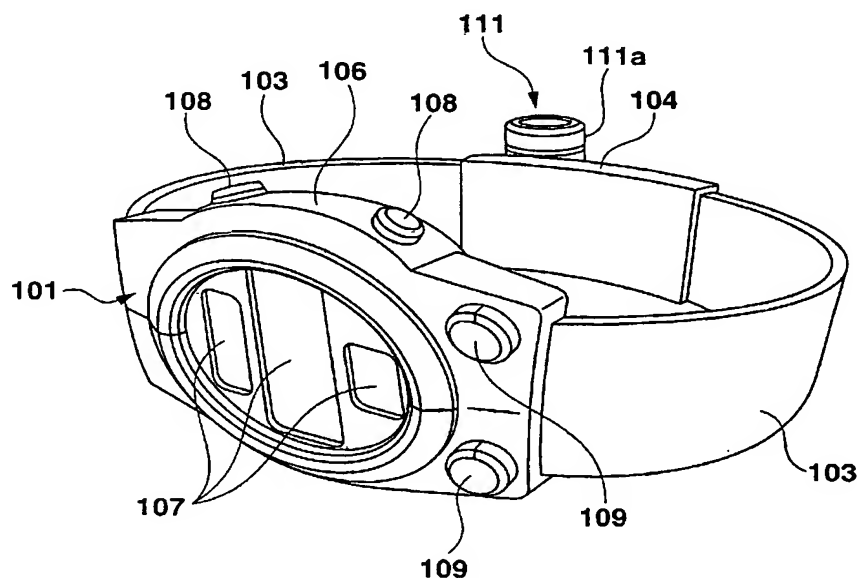
Published:
 — with international search report
 — before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

[Continued on next page]

- (54) Title:** WRIST-WORN COMMUNICATIONS APPARATUS WITH PERPENDICULARLY ORIENTED MICROPHONE AND LOUDSPEAKER



- (57) Abstract:** A watch of the communications apparatus is worn on a user's wrist by bands. A support member pivoted on the band is then turned so as to extend in the transverse direction of the bands. A speaker unit is provided on the support member so as to face in a transverse direction of the band while a microphone unit is disposed on the support member so as to face in a direction perpendicular to a surface of the band. When a user communicates with the other party, the speaker unit provided on the support member is directed toward the user's ear. This causes the microphone unit provided on the support member to be directed easily toward the user's mouth. Alternatively a hinged lid is provided the lid carrying a key-in unit or a display and a speaker unit.



(88) Date of publication of the international search report:

7 October 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.